



MediVan



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Successful Solutions



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Medivan is a pharmaceutical delivery vehicle built to individual requirements. Its features include dual compartment ambient temperature control and automated operation and control throughout. Delivery time, temperature and location are logged and traceable.

The vehicle has been developed in consultation with the UK government's Medicines and Healthcare products Regulatory Agency and complies fully with EU good distribution practice. Its automated operation ensures a predetermined start-up and shut-down procedure must be triggered by the driver, minimising human error. Vehicle tracking, data-logging and reporting systems are fitted and come with a number of customisable options. The cargo compartment is split into two separate temperature areas, providing room temperature storage and refrigeration for low temperature drugs. This capability has been tested and certified by MIRA.

M.H.R.A.

Fleet Service Ltd have taken advice and been in discussion with the MHRA to assist in the design of the vehicle system.

E.U. Good Distribution Practice (2013/c343/01) compliance

Great emphasis has been placed on ensuring that the conversion fully complies with Chapter 9 - Transportation sections of the above directive.

- 9.1 Principle
- 9.2 Transportation
- 9.3 Containers, packaging & labelling
- 9.4 Products requiring special conditions



Automatic Operation

The system has been designed to have as little input or control from the driver as possible. By achieving this we can reduce the number of false readings or the inadvertent incorrect use of the system.

Each morning the system will wake up when and after a specific process or action has been completed by the driver. This action is tailored to each customer's specific operational requirements.

Each day the vehicle will automatically power down the climate systems to conserve fuel when not in use. Again this will follow a predetermined operational process to be agreed with each client.

By controlling the vehicle like this the system self polices itself and ensures that when the system is not required it is not operational and therefore saving fuel, battery power which will lead to fuel efficiency savings which will be considerable over a year.

Proof of Delivery at Location

The vehicles system has a built in reporting system which can also be used as a tracking device if required. It also comes with a built in driver behaviour feature & guidance module.

When the vehicle arrives at a location, the split second any door is released off its lock allowing access into the cargo area a snapshot of the compartments temperatures, location and time are recorded. This can be retrieved at a later date if required for audit purposes to prove delivery requirements have been adhered to.

The system also logs door open time periods and automatically reports back to the system if temperatures stray outside agreed parameters. This information can be helpful for analysis of the daily operation which, can then be reviewed to determine if best practice is being carried out. This process can also lead to additional cost savings.



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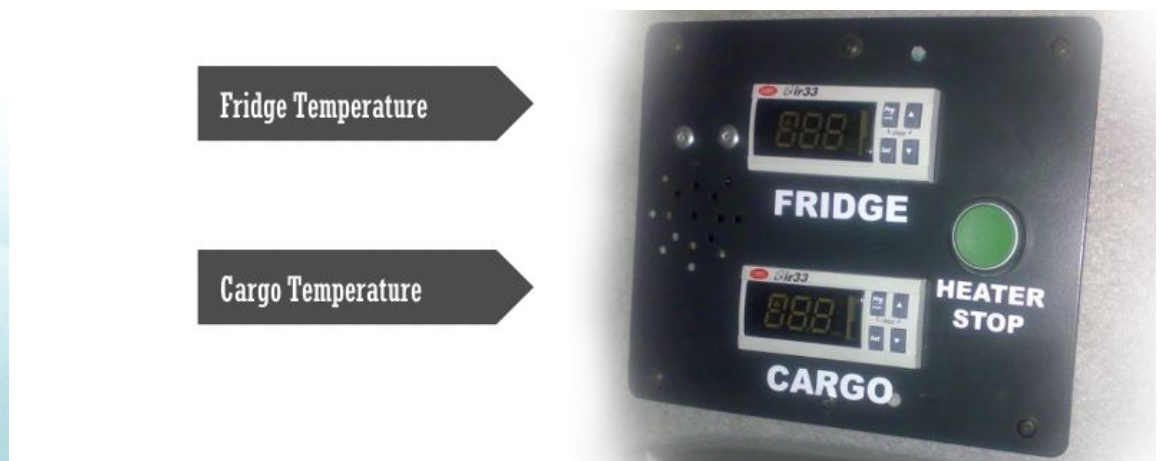
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Report Module

The report module is offered as a customisable unit subject to customers specific requirements. The standard module reports as above. Some of the options are listed below:

- Grid references replaced with specific delivery name and or address
- Warning if cargo doors are opened away from any specified delivery address
- Driver behaviour warnings
- Audit log to specific location, date and times.
- Audit log to specific deliveries
- Any additional requirements will be considered.

Split Load Area with Automatic Driver Warnings visual & audible



The Fleet Service demonstrator vehicle has been designed with a 140L transport fridge for the low temperature drugs. This is set currently to between 4.5 – 6.5 degrees.

The main cargo is set between 18 - 20 degrees at present.

When either compartment is accessed the system has a set time limit to get back to its agreed temperature. If it does not reach its predetermined temperature within the set timescale the driver is provided with a warning via a display and a buzzer. A separate display and warning is provided for the cargo area and the fridge unit.

The driver then has the option to follow predetermined operational procedures in relation to making the depot aware.



Vehicle Certification & Testing MIRA

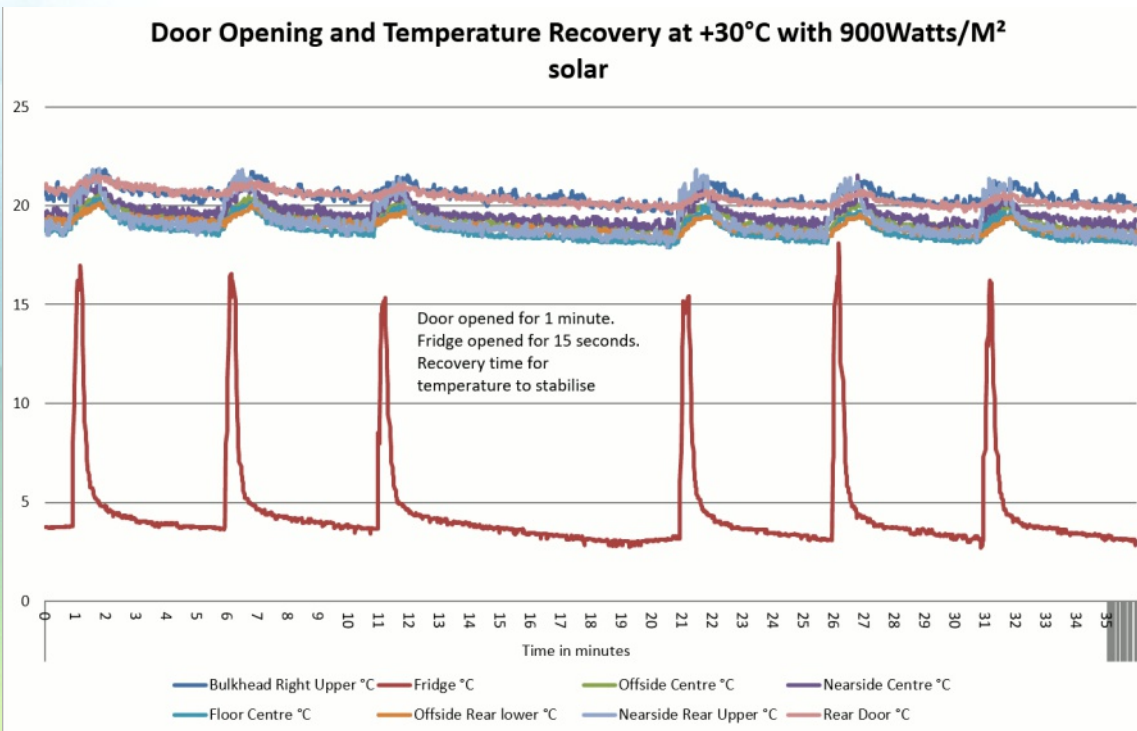
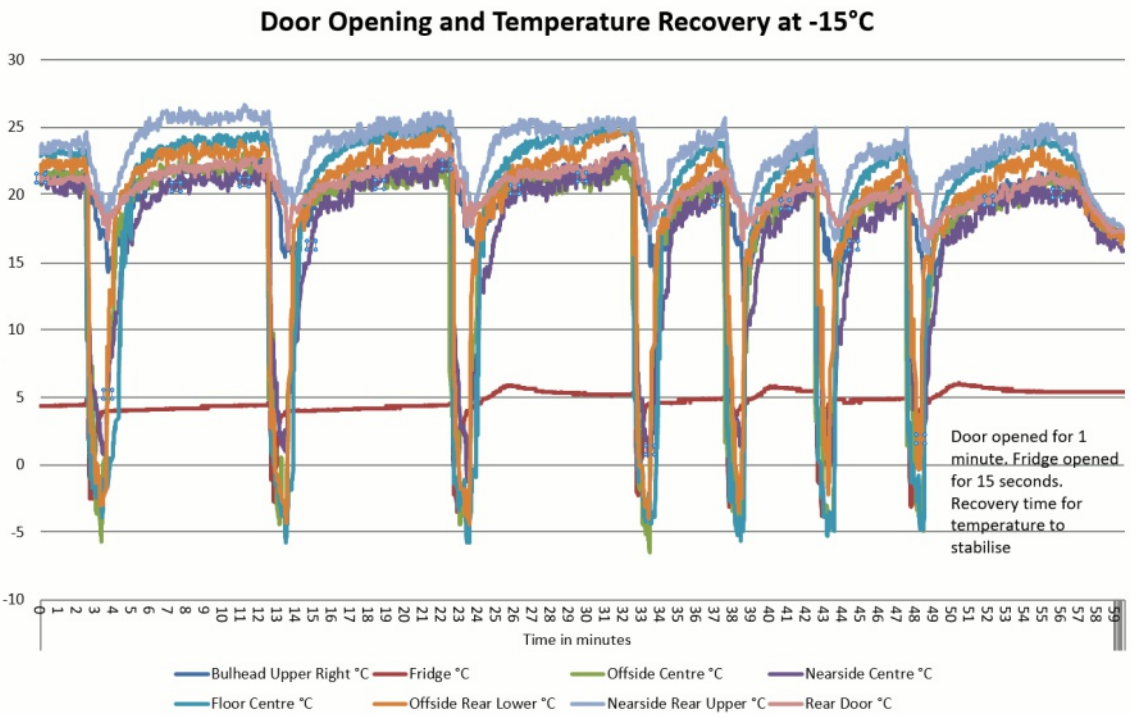
To confirm the vehicle meets with the required temperature readings in the agreed time scales. The vehicle has gone through an extensive testing process at M.I.R.A in the climatic chamber over a 5 day period. M.I.R.A. is the UK premier research test facility. The vehicle was tested from -15 degrees to + 30 degree. Solar was also applied to the vehicle when it was tested at 30 degrees.

By carrying out this type of in depth testing Fleet Service can ensure that the vehicle will fully meet the requirements set out in the directive. As part of this testing certain aspects have been highlighted that will come into play in specific geographical locations within the UK.



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Outline information pertaining to the testing at M.I.R.A. is included below.
For more detailed information on the test results please contact Graham Beston.



Bespoke Vehicle Design

Great emphasis has been placed on providing a cost effective but efficient way to achieve the GDP.

To this end various tests have been completed with varying degrees and types of insulation. This has led to Fleet Service designing a specific insulation composite which differs in specific areas of the vehicle to achieve cost effective but, correct results. This has been done whilst at all times costs being one of the major factors taken into consideration. Fleet Service believes we have come up with the most cost effective solution to the problem.

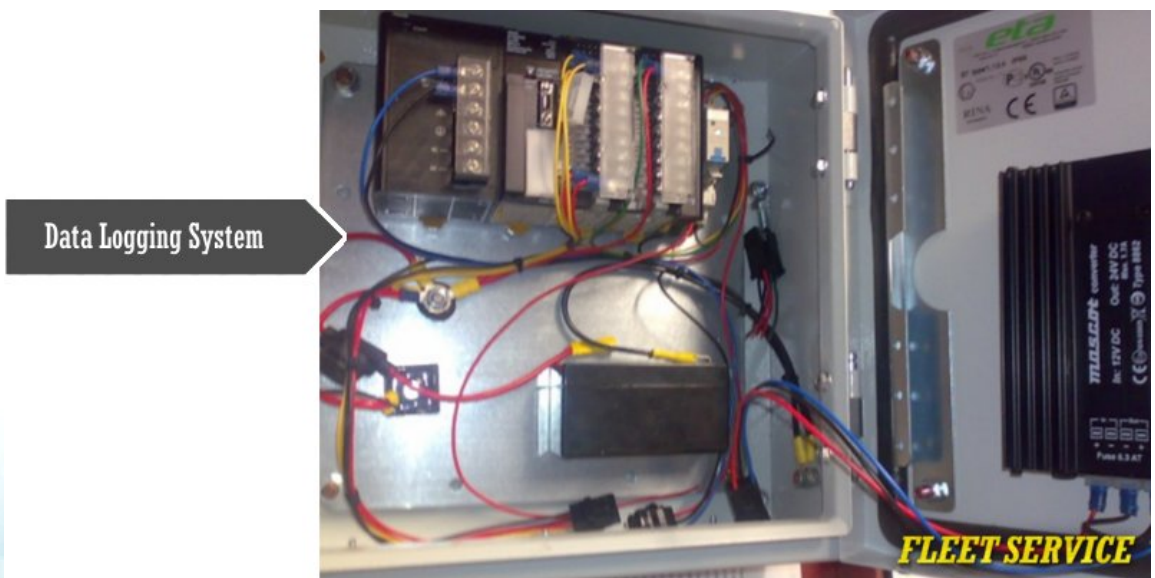
Fleet Service fully understands that no two clients operate their fleets in exactly the same way. This is why all of our vehicle conversions and control systems are specific to each individual customer.

We are able to achieve this because we initially require a full understanding of the client's daily operation.




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Fleet Service has developed a vehicle data logging system which can be installed into a client's vehicle for a predetermined period. This unit is then removed, down loaded and the data is analysed. From this data in the case of GDP the door opening process's can be checked and an average door opening time can be calculated. Only by doing this can any system truly be set up to provide the best results required for GDP. This again can and should lead to the equipment being operational for the minimum amount of time possible therefore reducing fuelling costs appropriately.



All of this information is kept strictly confidential. Fleet Service is happy to sign any of our customer's confidentiality agreements or is happy to provide our own if required.

Because of the lean manufacturing process's we follow we are efficient and flexible when it comes to specification changes.

A key feature of Fleet Service is that we have our own in house electrical design team who also carry out software writing, software changes as and if required.

There has been a substantial increase over the last 20 years of ever more supplementary electrical equipment being fitted to vehicles. Due to the very complex systems that we design and fit into the CIT market place we have considerable experience in managing electrical requirements.



At Fleet Service every installation follows a strict pre design process to determining the correct power supply required and the ability of the vehicle to be able to manage that supply adequately whilst at the same time limiting any driver input as far as possible.

All vehicle conversions are carried out with the aim of providing a product that will provide a reliable, cost effective solution for the life of the asset. The lifetime running cost is paid particular attention to when the initial specification is drawn up prior to agreement.



Cargo area being smoke tested to ensure integrity of the internal lining & door seals

Potential Efficiency Savings

The system has been designed to achieve the optimum temperature as soon as possible. By achieving this it should reduce the additional load placed on the engine power unit and consequently improve fuel economy.

It is impossible to be 100% accurate in determining the exact possible savings without carrying in depth testing in a controlled environment but, even this would not be able to compensate for different driving styles.



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Tests carried out recently by “Emission Analytics”. Their findings in relation to a vehicles mpg reduction due to air conditioning on diesel engines were a reduction of 6.4% urban and 3.3% motorway.

Most delivery vehicles tend to use a combination of both urban and motorway when carrying out the daily deliveries.

Potential fuel increases			
miles per annum	6.80%	3.30%	Target 2.50%
30000	£ 330.00	£ 155.13	£ 115.50
25000	£ 275.00	£ 129.27	£ 96.25
20000	£ 220.00	£ 103.42	£ 77.00
10000	£ 110.00	£ 51.71	£ 38.50
	Fuel costs		

Data Used

Fuel cost based on £1.00 per L exc VAT

based on returning 30 mpg combined standard

6.8% reduces fuel per gallon by 2.04 miles per gallon

3.3 % reduces fuel per gallon by 1 miles per gallon

2.5 % reduces fuel per gallon by 0.75 miles per gallon



After Sales Support

Fleet Service has a full after sales team with a dedicated office to ensure vehicle reliability and compliance. We offer dedicated telephone support which has proved invaluable to customers. All support services are provided in conjunction with a pre agreed S.L.A.

The after sales support for this product type is critical to ensure that the system is kept within the agreed tolerances.

The Fleetcare mobile support engineers carry all necessary equipment required to complete the calibration and repairs.

This is backed up by our own team of field base engineers supported by approved, trained sub contractors who cover the whole of the UK..

Annual service contracts are also offered for any conversion or specialist equipment fitted that requires routine maintenance or calibration. This is not limited to conversions supplied by Fleet Service.



Contact Details

For additional information or to arrange a demonstration of the vehicle, please contact Graham Beston.

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